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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,317	02/23/2005	Eberhard Piepho	05129-00089-US	5332

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EXAMINER

PARSA, JAFAR F

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/525,317

Applicant(s)

PIEPHO ET AL.

Examiner

Jafar Parsa

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/23/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franz et al (USPN 5,969,199).

Applicants claimed invention is directed to a process for the manufacture of pentafluoroethane, according to which tetrafluoroethylene is subjected to reaction with an organic nitrogenous base hydrofluoride at a temperature of greater than 100⁰C and not exceeding 160⁰C, wherein organic nitrogenous base hydrofluoride corresponds to the general formula (B*nHF) in which B denotes the organic nitrogenous base and n denotes a whole or decimal number of less than or equal to 4.

Franz teaches a process for preparation of fluorine containing alkane by reacting halogenated alkene with an organic nitrogenous base hydrofluoride corresponds to the

Art Unit: 1621

general formula ($B \cdot nHF$) in which B denotes the organic nitrogenous base and n denotes a whole or decimal number less than or equal to 4 (see abstract).

Franz teaches that it is preferred to carry out the process continuously in a bubble column, which consists of corrosion resistance metal. The reaction temperature, which can be used in the process, depends on the halogenated alkene employed and in general are -10 to $200^{\circ}C$, preferable at 0 to $100^{\circ}C$ (see col. 4, lines 57-66).

Franz teaches that the organic nitrogenous base is selected from the group consisting of triethylamine and tributylamine. The reaction pressure varies from 10 bar to 1 bar (see example 6, 7 and 12). Franz particularly teaches the synthesis of pentafluoroethane by reacting tetrafluoroethylene with a nitrogenous base hydrofluoride (tributylamine) to form pentafluoroethane. The chromatogram of the circulating gas showed a conversion of 97% to a product, which was identified as pentafluoroethane (R125). See example 10.

The difference between Franz and the claimed invention is that the instant claims require a temperature of greater than $100^{\circ}C$ and not exceeding $160^{\circ}C$, whereas Franz discloses that the reaction temperature for preparing pentafluoroethane maintained at about $55^{\circ}C$ with a conversion of 97% to a product (pentafluoroethane). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the instant claimed reaction at an optimum temperature through a routine experimentation to obtain maximum conversion of reactant to pentafluoroethane.

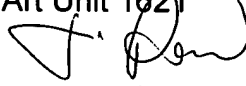
Art Unit: 1621

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jafar Parsa whose telephone number is (571)272-0643. The examiner can normally be reached on 8 a.m.-4:30 p.m. (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571)272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP

Jafar Parsa
Primary Examiner
Art Unit 1621

J. PARSA
PRIMARY EXAMINER